

**IN THE CLAIMS**

Please amend the claims as follows.

1. (Currently Amended) A process to inhibit or reduce the growth of bacteria and other pathogens in a liquid, comprising:

- a. ~~adding~~ sparging carbon dioxide (CO<sub>2</sub>) into the liquid, wherein the concentration of CO<sub>2</sub> in the liquid is from about 400-2000 ppm;
- b. thermally inactivating the bacteria and other pathogens in the liquid, wherein the added CO<sub>2</sub> cooperates to increase the efficacy of the thermal inactivation process; and
- c. removing free CO<sub>2</sub> from the liquid upon completion of the thermal inactivation process by application of a vacuum.

2. (Currently Amended) A process to enhance the efficacy of a thermal inactivation process of a liquid, comprising:

- a. ~~adding~~ sparging carbon dioxide (CO<sub>2</sub>) into the liquid, wherein the concentration of CO<sub>2</sub> in the liquid is from about 400-2000 ppm;
- b. thermally processing the liquid;  
wherein the added CO<sub>2</sub> cooperates with the thermal inactivation process so that the death rate of bacteria and other pathogens in the liquid is increased over the death rate that occurs during thermal inactivation carried out in the absence of the added CO<sub>2</sub>; and
- c. removing free CO<sub>2</sub> from the liquid upon completion of the thermal inactivation process by application of a vacuum.

Claims 3-11 (Canceled).

12. (Previously Presented) The process of claim 1, wherein the cooperative effect of the added CO<sub>2</sub> and the thermal inactivation process results in a reduction of undesirable biological changes in the liquid.
13. (Previously Presented) The process of claim 2, wherein the cooperative effect of the added CO<sub>2</sub> and the thermal inactivation process results in a reduction of undesirable biological changes in the liquid.
14. (Previously Presented) The process of any of claims 1, 2, 12, or 13, wherein the shelf life of the liquid is increased thereby.
15. (Previously Presented) The process of any of claims 1, 2, 12, or 13, wherein the liquid comprises a dairy product, a vegetable juice, a fruit juice, a plant extract, a fungal extract, or a combination thereof.
16. (Previously Presented) The process of claim 15, wherein the liquid comprises a dairy product.
17. (Previously Presented) The process of claim 16, wherein the dairy product is milk.
18. (Previously Presented) The process of any of claims 1, 2, 12, or 13, wherein the liquid contains one or more flavoring agents.
19. (Previously Presented) The process of claim 18, wherein the flavoring agent is a fruit flavor, vegetable flavor, chocolate flavor, vanilla flavor, soft drink flavor, or malt flavor.
20. (Canceled).
21. (Currently Amended) The product produced by any of claims 1, 2 or ~~12-19~~ 20.